

The Energy Saving Trust: Our View to 2030 for England

Introduction

This document sets out the Energy Saving Trust's view of key actions needed in the next ten years in England, to get us on track for net zero by decarbonising buildings and communities.

Over the past decade, the UK successfully transformed its power sector through a mix of policy and market-based measures. Now the priority has to be transforming patterns of demand in key carbon emitting sectors. Nowhere are new policies needed more than in the building sector, where carbon emissions are set to rise over the next fifteen years without new policies, according to the Government's own analysis.

Most energy in buildings is used for heating. There is a consensus that we urgently need a national plan to decarbonise heating, taking account of options including electric heating, particularly heat pumps, renewably-sourced hydrogen in the gas grid and wider roll-out of district heating.

Whatever the national plan, the 'no regrets' early action is clear. Retrofitting homes to an Energy Performance Certificate standard of 'C' would save as much energy as six times the forecast output for the Hinkley Point C power station¹. We also need zero carbon new build as soon as possible and an early phase out of high carbon heating such as oil, LPG and coal.

Action doesn't need to always happen at individual building level. Community energy initiatives can play a significant role in identifying new ways of doing things by engaging participants and helping systems evolve.

Our vision for homes and communities

Our vision for net zero is built on a very efficient housing stock, which cuts energy demand further by a high degree of local renewable energy generation and storage at both household and community level. Designing out the need for energy where possible is the best way of protecting future households from fuel poverty.

This transformation will not happen unless there is a clear roadmap for raising energy standards in our homes. That needs to be underpinned by information, regulation and financial support. Grants are necessary for low-income households while the private sector, backed by the government, can provide low-cost finance for 'able to pay' households.

Minimum standards for home energy performance linked to the roadmap will be important, as will strengthened consumer protection. Crucially, householders will only act if they know what to do, and some households, such as those with vulnerable residents, need expert support. Everyone should have access to impartial, expert advice on what energy measures will work for individual homes and how to fit and pay for them. We see a support network of advice centres across the country providing consistent and coordinated information and relevant handholding support as being key to deliver this.

¹ Cambridge Econometrics & Verco (2014) Building the Future: the economic and fiscal impacts of making homes energy efficient

Our vision isn't just about making households more efficient – it is about doing things differently. Working at a community scale offers greater scope to displace generation with demand side measures, to use local generation to ease pressure on the grid at peak times and to empower communities to make decisions about their local needs.

Our priorities for homes

1. For all homes to be retrofitted to at least 'C' by 2030

The last Government's 'aspiration' in the 2017 Clean Growth Strategy for homes to reach 'C' by 2035 should be bought forward to 2030 (in line with the UK's statutory target on fuel poverty). This will require at least £1.5bn/ year additional public investment to 2030 but initial analysis from the Energy Efficiency Infrastructure Group (EEIG) suggests that earlier delivery would increase the associated benefits to the economy, jobs and health. The economic activity, for example involved in getting just to 'C' (in the UK) would increase tax revenue by £51.1 billion by 2030².

2. A roadmap, underpinned by regulation and incentives, for the market to drive improvement to meet the EPC "C" standard

Evidence from European programmes with generous incentives to retrofit shows that voluntary action alone will not deliver the scale of delivery required (even for 'C' by 2035 - 1.1m homes/ year). A clear long-term trajectory of the minimum energy efficiency standards required for sale and rental would provide homeowners with the confidence to invest and the ability to reduce disruption by having the time to plan improvements in the best way for them.

3. Democratise retrofit: Encourage voluntary action to improve to 'B' or 'A' by providing generous, low-cost finance for homeowners plus incentives for social housing providers to deliver large-scale innovation

Whilst 'C' (where feasible) is an appropriate regulatory minimum, many homes can reach a higher standard, particularly by fitting renewable energy systems. The rapid take-up of the Feed-in Tariff for solar PV panels demonstrates the wide interest amongst households to go beyond demand reduction to generate, store and export energy.

Ensuring that households can access sufficient low-cost finance to deliver a 'whole house' low carbon retrofit, will grow the market and boost innovation at a lower cost to the state. Scotland's zero-interest loan schemes, administered by Energy Saving Trust, provide one example of this. An equivalent French scheme leverages £9 of private sector funding on average for each £1 invested by the state and the German KfW retrofit financing scheme almost covers running costs from increased VAT revenues alone³.

The social housing sector could play a pivotal role here in innovating and bringing down costs if supported to do so by new powers and flexibilities.

4. Ensure that assessments of the level of retrofit that is 'cost-effective' includes the wider public benefits as well as short-term bill savings

Retrofitting our leaky homes delivers substantial benefits beyond the immediate cost savings to the householder and carbon abatement. Getting to EPC C would reduce gas

² Cambridge Econometrics & Verco (2014) Building the Future: the economic and fiscal impacts of making homes energy efficient

³ EEIG (2019): The Net Zero Litmus Test: Making energy efficiency a public and private infrastructure investment priority

imports by 26 percent⁴, avoid costly grid reinforcements (currently estimated at a net value of £4.3 billion⁵) and cut the overall cost of decarbonising heating by £6.2 billion per year.⁶ Energy efficiency also delivers co-benefits to the NHS, employment and the wider economy. For the NHS, the avoided cost of treating people with conditions exacerbated by cold damp homes is estimated at £1.4 and £2.0 billion each year (in England alone)⁷; employment has been estimated at 100,000 FTE jobs to 2030⁸ and overall impact, as a 0.6% GDP increase by 2030⁹.

5. Heat solutions must consider the long-term impact on consumer bills

To decarbonise our buildings, heating could be largely electrified (using heat pumps for example) or based on low carbon gas (renewably sourced hydrogen and a biogas such as bio-methane) or a hybrid of the two. Alongside this, community heating (where a centralised heat source distributes heating to consumers' homes via a buried network of insulated pipes) could provide heat for around 5 million homes¹⁰.

Different heat solutions will have different impacts on users (upfront costs, on-going costs, ability to operate flexibly) but all are likely to involve higher costs on a whole-system basis than current natural gas heating. To ensure that consumers are not disadvantaged, credible heat solutions must start with a high level of retrofit and should seek to minimise impacts on current and future customers, as well as system costs (as we explore above).

The focus of action to 2030 must be on large-scale pilots for electric heating and low carbon gas alternatives and hybrids. Currently there are just 200,000 installed heat pumps.

For homeowners on the gas-grid a heat pump is still much less cost-effective than a gas boiler, and even for people off the gas grid the upfront costs can be high. A rapid increase in uptake of these measures will require urgent rebalancing of costs, taxes and incentives.

Our priorities for communities

1. Advice: Empower homeowners and communities to act by providing a centrally-funded regionally delivered network of advice centres

The groundswell of support for local Climate Emergency Declarations highlights that many people want to play an active part in the low carbon transition in their communities. However, communities do not want the transition to *'be done to them'*.

Easy access to expert, impartial and tailored advice, is important here. The Energy Saving Trust manages government funded community energy support programmes in Scotland and Wales, but there is nothing equivalent in England.

Provision of advice on community action can sit alongside advice to individual households. This level of 'hand-holding' along with improved consumer protection is necessary if we

⁴ Ibid

⁵ Rosenow et al. (2018) The remaining potential for energy savings in UK households

⁶ Imperial College London (2018) Analysis of Alternative UK Heat Decarbonisation Pathways

⁷ Roys et al. (2016) The full cost of poor housing

⁸ Cambridge Econometrics & Verco (2014) Building the Future: the economic and fiscal impacts of making homes energy efficient

⁹ Ibid

¹⁰ Committee on Climate Change – Further Ambition scenario

want people and communities to invest their own money and make the right choices for them .

2. **Ensure new routes to market for community energy**

Community energy has the potential to play a key role in encouraging the uptake of new technologies and business models and supporting the shift to a more distributed, decentralised and digitised energy system. An explosion in the growth of community energy over the last decade was driven by the solar photovoltaic Feed in Tariff. It allowed communities to invest in solar panels and enjoy a steady 25 year return, which could in turn be invested in other local energy initiatives. That's a policy and a business model that's now largely ended, and other recent tax and policy changes have also undermined: for example limits on tax relief for investment and the increase in VAT for energy saving materials including solar-battery systems and heat pumps.

The Community Energy sector is highly creative and there is still innovation happening. One example is Bioregional's [Levelling the Renewable Playing Field](#) project, which uses new software to allow low income residents of a social housing block to purchase lower cost energy from the block's rooftop solar panels. Nonetheless, the next government needs a strong focus on how energy policies and taxes can promote, rather than limit, community energy.

'Flexibility first': allow local generation and demand reduction to compete with generation

Demand-side measures such as demand-side response (DSR) and permanent energy reduction (via retrofitting, for example) could play a valuable role, alongside storage and local low carbon generation, in balancing the electricity grid and avoiding costly reinforcements. We would like to see the regulatory regime amended to oblige network companies to create a level playing field for demand-side measures and to reward innovation on this.